

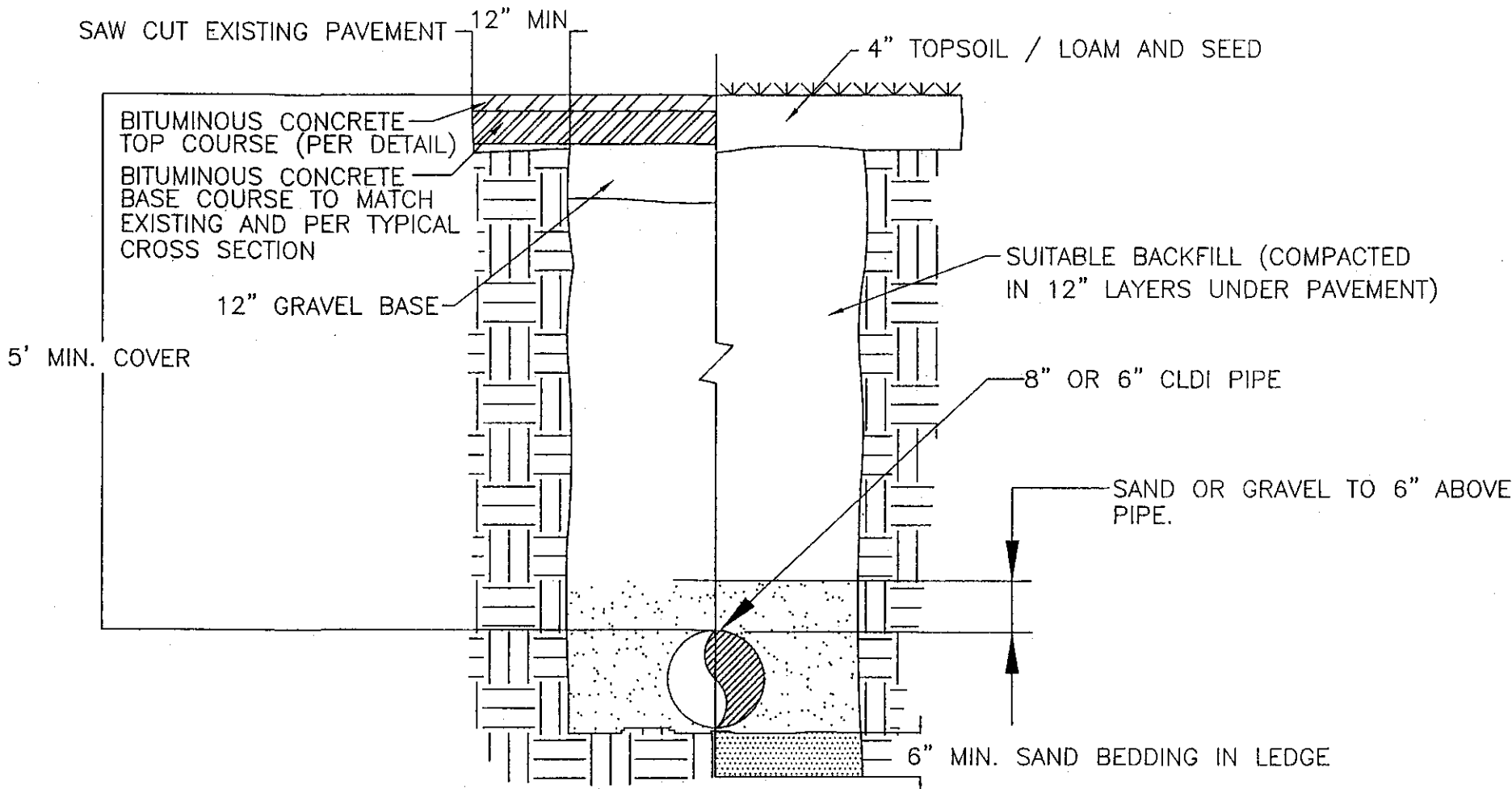
WATER WORKS NOTES

MATERIALS

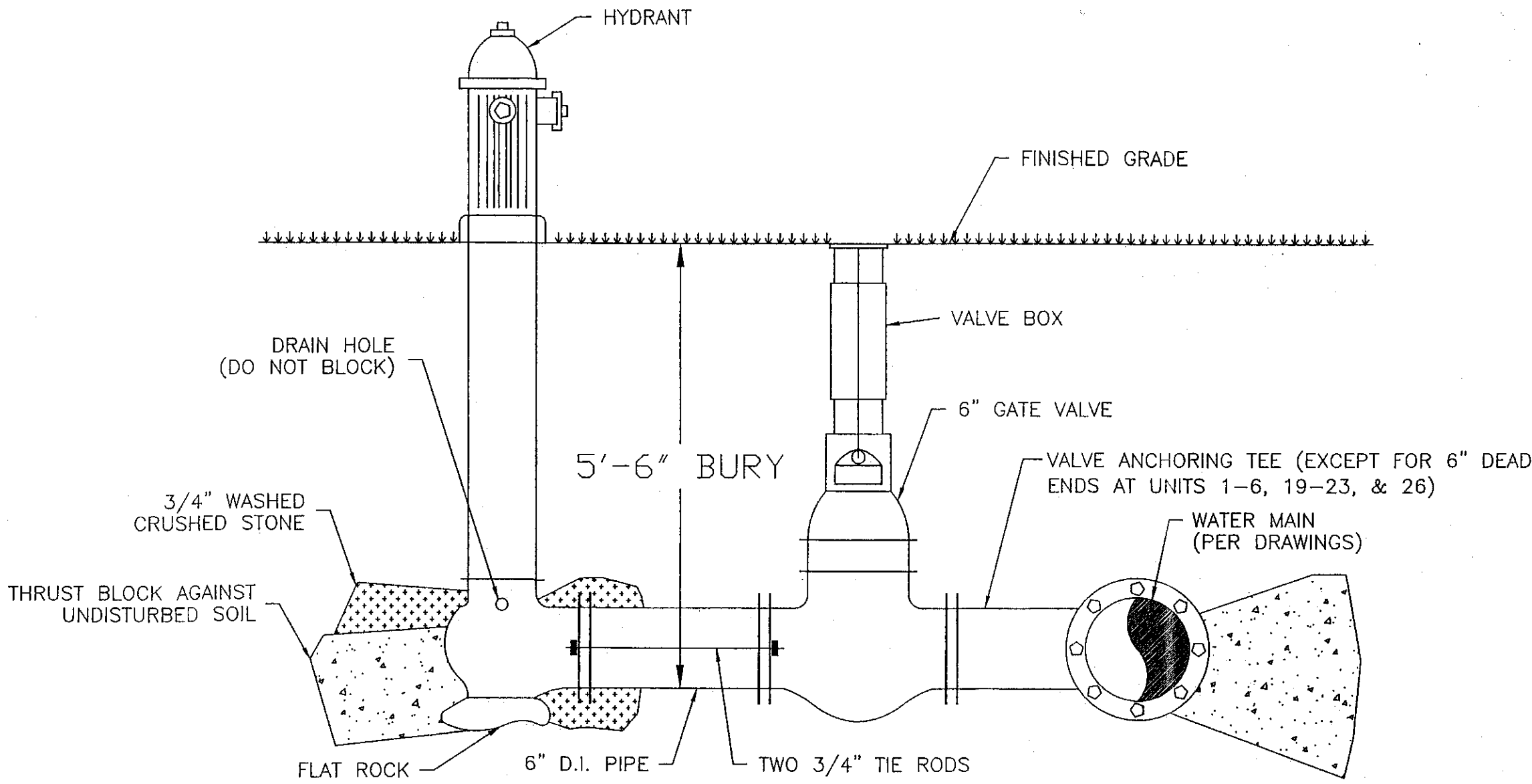
- 1) Water Mains: Class 52 ductile iron pipe with push on joints per AWWA C151/A21.10-91. Pipe to be centrifugally cast, exterior bituminous coated, double cement lined, and interior seal coated.
- 2) Fittings: Cast Iron or Ductile Iron with mechanical joints per AWWA C110/A21.10-87 and rubber gaskets per AWWA C111/A21.11-85.
- 3) Valves: Resilient Seated Gate Valves per AWWA C509-87. Valves shall open left (or per Water Co.), and HRS gear box with 2" square operating nut.
- 4) Hydrants: Dry-Barrel type per AWWA C502-85. Hydrants shall open left and have 6" mechanical joint inlet, 5-1/2' bury, 5-1/4" valve opening, two 2-1/2" outlet nozzles, and one 4-1/2" outlet nozzle. Hydrants shall be Mueller Centurian or approved equal.
- 5) Services: 1" 200 psi plastic complete with corporation cock and curb stop.
- 6) Boxes: All valves shall be provided with 7' adjustable cast iron boxes. Valve boxes shall include two hole cast iron covers. Curb boxes shall be Eirie type.
- 7) Shop Drawings: Shop Drawings for all materials must be submitted to the Grafton Water District for approval prior to construction.

INSTALLATION

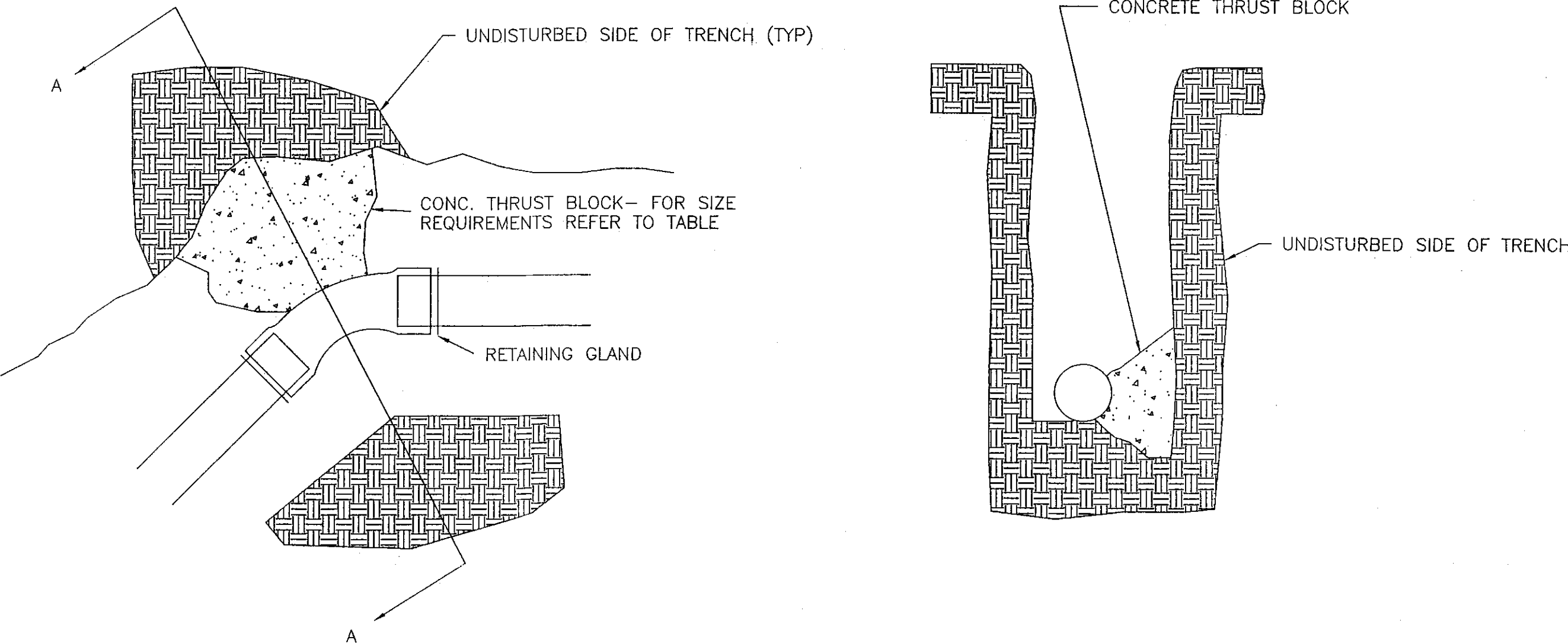
- 1) Water mains shall be installed in accordance with AWWA C600-87 and district rules.
- 2) Water mains shall be pressure and leakage tested in accordance with AWWA C600-87 and district rules.
- 3) Water mains shall be disinfected in accordance with AWWA C651-86.
- 4) End of each water service shall be marked with 3' long steel rebar painted fluorescent orange.
- 5) Contact the Grafton Water District prior to commencing water main installation.
- 6) The contractor shall be responsible for coordinating with the Grafton Water District for the installation of a full wrap tapping sleeve & gate valve at Avalon Way (sized to fit existing).



TYPICAL WATER TRENCH (N.T.S.)

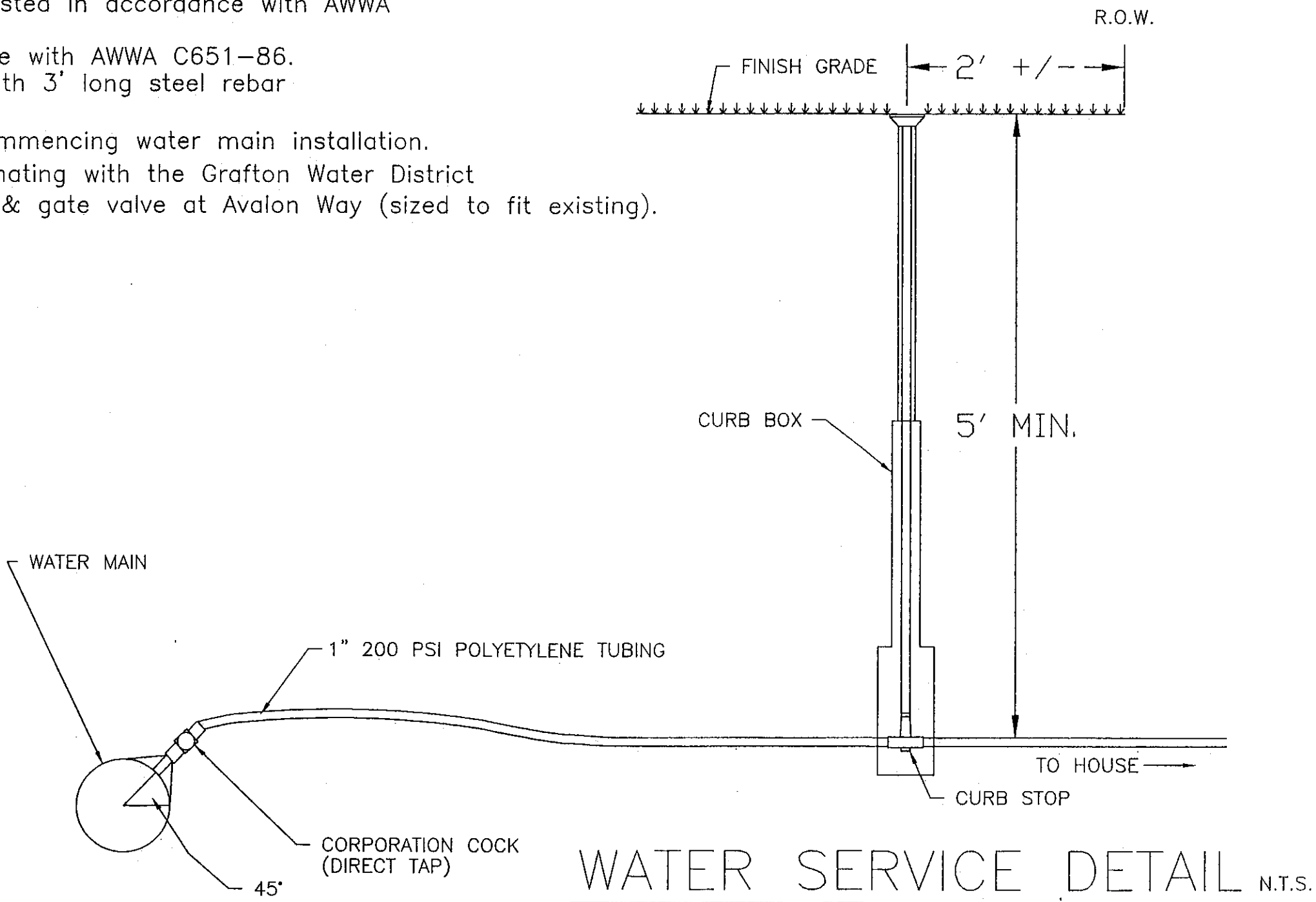


NOTE- VALVE BOX AND FIRE HYDRANT TO BE INSTALLED PLUMB  
HYDRANT ASSEMBLY (N.T.S.)



PLAN VIEW

SECTION A-A



WATER SERVICE DETAIL N.T.S.

BEARING AREA AGAINST UNDISTURBED SOIL (SQ.FT.)*						
PIPE SIZE	90 DEG. BEND	45 DEG. BEND	22.5 DEG. BEND	TEE or PLUG	HYDRANT	
4"	4.0	4.0	4.0	4.0	N/A	
6"	4.0	4.0	4.0	4.0	4.0	
8"	7.0	4.0	4.0	5.0	N/A	
12"	14.0	8.0	4.0	10.0	N/A	

\* BASED UPON 150 PSI PREASURE AND 2,000 LBS/SQ.FT. ALLOWABLE SOIL PRESSURE

THRUST BLOCK DETAIL N.T.S.

Approval By  
Town of Grafton  
Zoning Board of Appeals

Date: 9/13/12  
[Signature]

(Ref. Comprehensive Permit  
WDRD Bk 46010 pgs.1-37)

GRAZ Engineering, LLC

323 WEST LAKE ROAD,  
FITZ WILLIAM, NH 03447  
TEL.: (603) 585-6959  
FAX: (603) 585-6960

PROVIDENCE ROAD COMMONS; 195 PROVIDENCE ROAD  
40B SITE PLAN- WATER DETAILS

PREPARED FOR: PROVIDENCE ROAD COMMONS, LLC  
43 CORTLAND WAY; GRAFTON, MASSACHUSETTS

Scale: AS NOTED  
Drawn By: PFG  
Date: OCTOBER 22, 2010  
Revised: Jan. 25, 2011  
Feb 18, 2011  
April 25, 2011  
March 25, 2012



DRAWING SET  
SHEET 9 OF 12

REV: 8/1/12 FOR ZBA